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U.S. Department
of Transportation

East Building, PHH-30
1200 New Jersey Avenue S.E.
Washington, D.C. 20590

**Pipeline and Hazardous
Materials Safety Administration**

DOT-SP 11054
(TWENTY-FIFTH REVISION)

EXPIRATION DATE: 2022-04-30

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: Welker, Inc.
Sugar Land, TX
2. PURPOSE AND LIMITATIONS:
 - a. This special permit authorizes the manufacture, mark, sale, and use of non-DOT specification stainless steel cylinders conforming with all regulations applicable to a DOT Specification 3A cylinder, except as specified herein, for the transportation in commerce of the hazardous materials listed in paragraph 6 below. This special permit provides no relief from the Hazardous Materials Regulations (HMR) or the International Civil Aviation Organization's Technical Instructions (ICAO TI) other than as specifically stated herein. The most recent revision supersedes all previous revisions.
 - b. The safety analyses performed in development of this special permit only considered the hazards and risks associated with transportation in commerce.
 - c. In accordance with 49 CFR 107.107(a), party status may not be granted to a manufacturing permit. These packagings may be used in accordance with 49 CFR 173.22a.
 - d. This special permit serves as an "Approval" under Part 6, Chapter 5, Paragraph 5.1.1.2 of the ICAO TI, and as a "Competent Authority Approval" as defined under 49 CFR § 107.1.
3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180 and the ICAO TI.

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4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 173.201(c), 173.202(c), 173.203(c), 173.302a(a)(1), and 173.304a(a)(1) and (d)(3)(i) in that non-DOT specification cylinders are not authorized, except as specified herein; § 173.301(f)(2) and § 177.840(a)(1) in that the pressure relief device on the product side of the cylinder is in contact with liquid product at all times.
5. BASIS: This special permit is based on the application of Welker, Inc. dated May 28, 2020, submitted in accordance with § 107.105 and the public proceeding thereon.
6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Material Description			
Proper Shipping Name*	Hazard Class/Division	Identification Number	Packing Group
Air, compressed	2.2	UN1002	N/A
Ammonia solution, <i>relative density less than 0.880 at 15 degrees C in water, with more than 35 percent but not more than 50 percent ammonia</i>	2.2	UN2073	N/A
Butane	2.1	UN1011	N/A
Carbon dioxide	2.2	UN1013	N/A
Compressed Gas, toxic, flammable, n.o.s.**	2.3	UN1953	N/A Hazard Zones A, B, C, and D
Compressed gas, flammable, n.o.s. (crude oil under pressure)	2.1	UN1954	N/A
Compressed Gas, toxic, n.o.s.	2.3	UN1955	N/A Hazard Zone D

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Hazardous Material Description			
Proper Shipping Name*	Hazard Class/ Division	Identification Number	Packing Group
Dichlorodifluoromethane	2.2	UN1028	N/A
1,2-Dichloro-1,1,2,2-Tetrafluoroethane	2.2	UN1958	N/A
Ethane	2.1	UN1035	N/A
Gasoline	3	UN1203	II
Helium, compressed	2.2	UN1046	N/A
Heptanes	3	UN1206	II
Hexane	3	UN1208	II
Hydrocarbon gas mixture compressed, n.o.s.	2.1	UN1964	N/A
Hydrocarbon gas mixture, liquefied, n.o.s.	2.1	UN1965	N/A
Hydrocarbons, liquid, n.o.s.	3	UN3295	I, II, or III
Hydrogen sulfide**	2.3	UN1053	N/A Hazard Zone B
Isobutane <i>see also</i> Petroleum gases, liquefied	2.1	UN1969	N/A
Isopropanol or Isopropyl Alcohol	3	UN1219	II
Kerosene	3	UN1223	III
Liquefied gas, flammable, n.o.s.	2.1	UN3161	N/A
Liquefied gas, n.o.s.	2.2	UN3163	N/A

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Hazardous Material Description			
Proper Shipping Name*	Hazard Class/ Division	Identification Number	Packing Group
Liquefied gas, toxic, flammable, n.o.s.	2.3	UN3160	N/A
Methane, compressed or Natural gas, compressed	2.1	UN1971	N/A
Nitrogen, compressed	2.2	UN1066	N/A
Oil gas, compressed**	2.3	UN1071	N/A
Pentanes	3	UN1265	I or II
Petroleum crude oil	3	UN1267	I, II, or III
Petroleum distillates, n.o.s. or Petroleum Products, n.o.s.	3	UN1268	I
Petroleum gases, liquefied	2.1	UN1075	N/A
Propane	2.1	UN1978	N/A

NOTES:

*See paragraph 8.i. for additional restrictions for Division 2.1 and Division 2.3 hazardous materials.

**Applicable parts of § 173.40 must be complied with when transporting this material.

Other materials must be specifically identified to, and acknowledged in writing, by the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD) prior to the first shipment.

7. SAFETY CONTROL MEASURES:

- a. PACKAGING: Prescribed packaging is a stainless steel non-DOT specification cylinder, constructed from seamless stainless steel tubing, with flanged flat head end closures

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at each end restrained by tie rods, and may contain a piston which forms two pressure chambers. Cylinder must conform with Welker, Inc. drawings and calculations on file with the Office of Hazardous Materials Safety Approvals and Permits Division (OHMSAPD) and with the DOT Specification 3A (§§ 178.35 and 178.36), except as follows:

§ 178.35(b) *Inspections and analyses.*

Chemical analyses and tests as specified must be made within the United States unless otherwise approved in writing by the Associate Administrator, in accordance with § 107.807. Certification of all original cylinder designs (Models CP-5, CP-24, CSCC or CP-2HP) must be performed by an independent inspection agency (IIA) approved in writing by the Associate Administrator, in accordance with § 107.803(a). The IIA certification must include an examination of the manufacturer's quality assurance procedures and the training records of the manufacturer's inspectors and a statement that the cylinder design meets all the requirements of this special permit. Once the IIA certifies a cylinder design, inspections and verifications required during production may be carried out by a manufacturer's inspector.

§ 178.35(e) *Safety devices.*

Pressure relief devices and other connections, if applied, must be as required or authorized by the appropriate specification, and as required in § 180.205(a) and § 173.301. Each head must be equipped with pressure relief devices.

§ 178.35(f) *Markings.*

Applies except cylinders must be marked "DOT-SP 11054" in lieu of "DOT-3A".

§ 178.35(g) *Inspector's report.*

(added) The inspector's report may be revised to accommodate the tests required by this special permit. A copy of the inspector's report on the first lot out of each design must be submitted to the OHMSAPD prior to shipment of the cylinders.

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§ 178.36(a) *Type, size and service pressure.*

(1) Model CP-5 piston style receptacle has flat heads on each end restrained with 8-5/8 inch tie rods, which are secured by nuts. The maximum volume may not exceed 6,000 cc. The maximum service pressure may not exceed 1,800 psig (six bolt configuration) or 2,160 psig (eight bolt configuration). The dimensions are as follows:

Maximum inside diameter: 3.785 inches.

Maximum length: 39.5 inches.

Minimum side wall thickness: 0.192 inch.

(2) Model CP-5 single cavity receptacle (without pistons) has flat heads on each end restrained with 8-5/8 inch tie rods, which are secured by nuts. The receptacle has an eight bolt configuration. The maximum volume may not exceed 6,000 cc. The maximum service pressure may not exceed 2,160 psig. The dimensions are as follows:

Maximum inside diameter: 3.785 inches.

Maximum length: 42.5 inches.

Minimum side wall thickness: 0.192 inch.

(3) Model CP-2HP piston style receptacle has flat heads on each end restrained with 6-1/2 inch tie rods, which are secured by nuts at one end and threaded into the flat head at the other end. The maximum volume may not exceed 1,000 cc. The maximum service pressure is 3,600 psig. The dimensions are as follows:

Maximum inside diameter: 1.780 inches.

Maximum length: 29.25 inches.

Minimum side wall thickness: 0.235 inch.

(4) Model CSCC (Core Sample Containment Cylinder) has flat heads on each end restrained with 8-7/8 inch tie rods which are secured by nuts at one end and threaded

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into the flat head at the other end. The maximum volume may not exceed 912.4 in³. The maximum service pressure is 2,160 psig. The dimensions are as follows:

Maximum inside diameter: 5.78 inches.

Maximum length: 47.185 inches.

Minimum side wall thickness: 0.407 inch.

(5) Models CP-24-GA and CP-24-GM, from drawings AD294CO.DOT, Rev. B and AD121CO.DOT, Rev. B, respectively, have flat heads on each end restrained with 6-1/2 inch tie rods, which are secured by nuts at one end and threaded into the flat head at the other end. The maximum volume may not exceed 1,000cc. The maximum service pressure is 5,000 psig. The dimensions are as follows:

Maximum inside diameter: 1.784 inches.

Maximum length: 29.25 inches.

Minimum side wall thickness: 0.273 inch.

§ 178.36(b) *Steel.*

All cylinder components must be Type 304 or Type 316 stainless steel.

§ 178.36(g) *Heat treatment.*

The completed cylinders need not be heat treated.

§ 178.36(i) *Hydrostatic test.*

(1), (2), and (3) * * *

(5) Cylinders must be tested as follows:

(i) Each compartment of each piston style receptacle must be subjected to a pneumatic test of at least 500 psig without leakage.

(ii) Each cylinder (seamless tube with end caps but without pistons, and with tie bolts) must be hydrostatically tested to at least 3,000 psig in the case of cylinders with a marked service

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pressure of 1,800 psi; 3,600 psig in the case of cylinders with a marked service pressure of 2,160 psi; 6,000 psig in the case of cylinders with a marked service pressure of 3,600 psi; or 8,333 psig in the case of cylinders with a marked service pressure of 5,000 psi and show no defect.

§ 178.36(j) *Flattening test.*

The tube body of one cylinder from each lot of 200 or less that has passed the test prescribed in § 178.36(i)(5)(ii) of this special permit must be flattened to at least 6 times wall thickness without cracking.

§ 178.36(m) *Leakage test.*

Not applicable.

b. TESTING:

(1) Each cylinder must be visually reinspected at least once a year for deterioration of seals, scratches, dents and gouges, and must be cleaned as needed with an appropriate solvent recommended by the manufacturer. Components that are deteriorated or damaged shall be replaced by factory specified parts as shown on Welker, Inc. drawings and IOM manuals. Components may be replaced by the factory or the user, observing Tie Rod Nut tightening torque values shown in the Welker, Inc. IOM manuals.

(2) Each cylinder must be requalified in accordance with the § 180.209 requirements for a DOT Specification 3A cylinder.

c. OPERATIONAL CONTROLS:

(1) Each cylinder must be maintained and used in accordance with the HMR requirements for a DOT Specification 3A cylinder.

(2) The cylinder may be used for oil-well, natural gas, and liquefied petroleum (LP) gas sampling service and additional materials covered in the table above in paragraph 6 that are being transported for purposes of analytical testing.

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(3) The model CP-5 single cavity receptacle may be used as a containment cylinder for a non-DOT specification down-hole cylinder (also known as a sample core cylinder) during shipment. The down-hole cylinder must have a maximum internal volume of 60 cubic inches (983 cc) and a maximum charge pressure of 10,000 psig. The down-hole cylinder must be securely positioned within the CP-5 receptacle to prevent excessive movement. The down-hole cylinder must be limited in pressure and volume so that in the event that the cylinder totally discharged into the CP-5, the pressure in the CP-5 will not exceed 2,160 psig at ambient temperature.

8. SPECIAL PROVISIONS:

a. In accordance with the provisions of Paragraph (b) of § 173.22a, persons may use the packaging authorized by this special permit for the transportation of the hazardous materials specified in paragraph 6, only in conformance with the terms of this special permit.

b. A person who is not a holder of this special permit, but receives a package covered by this special permit, may reoffer it for transportation provided no modification or change is made to the package and it is offered for transportation in conformance with this special permit and the HMR.

c. A current copy of this special permit must be maintained at each facility where the package is offered or reoffered for transportation.

d. Each packaging manufactured under the authority of this special permit must be marked with a registration symbol designated by the Office of Hazardous Materials Safety Approvals and Permits Division for a specific manufacturing facility.

e. A current copy of this special permit must be maintained at each facility where the package is manufactured under this special permit. It must be made available to a DOT representative upon request.

f. No modifications may be made to the cylinder, which would affect its performance and its compliance with the requirements of this special permit until such modifications

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have been reviewed, tested, and certified by an Independent Inspection Agency (IIA) as meeting the requirements of this special permit.

g. If the Associate Administrator or the IIA deems it necessary, the IIA may perform periodic inspections of the manufacturer's facility.

h. The IIA's design certification must include test results and documents related to the cylinder design approval. A copy of the design certification must be maintained at each facility where the cylinder is manufactured and by the IIA for a period of 15 years from the date of completion of the design certification.

i. Transportation of Division 2.1 (flammable gases) or Division 2.3 (toxic by inhalation gases) are not authorized aboard cargo vessel or aircraft unless specifically authorized in the Hazardous Materials Table in § 172.101.

j. All internal coatings for cylinders shall be compatible with both the hazardous material and the cylinder.

9. MODES OF TRANSPORTATION AUTHORIZED: Motor vehicle, rail freight, cargo vessel, and cargo-only aircraft.
10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each cargo vessel, aircraft, or motor vehicle used to transport packages covered by this special permit. The shipper shall furnish a current copy of this special permit to the air carrier before or at the time the shipment is tendered.
11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:
 - o All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, Parts 171-180.
 - o Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.

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- o Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when the special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) - "The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 Immediate notice of certain hazardous materials incidents, and 171.16 Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:



for William Schoonover
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the

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Hazardous Materials Safety Homepage at

http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm

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PO: AC/TG/kah